

Mineral Industry Surveys

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NICKEL IN NOVEMBER 2005

Reported domestic nickel consumption in November, on a daily average basis, was less than that in October, according to the U.S. Geological Survey. Daily average nickel consumption of cathodes, pellets, briquets, powders, and ferronickel for stainless steel production was 20.6 metric tons per day (t/d). This consumption figure is currently being reviewed and is expected to be revised significantly upward in a subsequent report. Consumption of >99.8% nickel metal to make superalloys (such as INCONEL 718 and WASPALOY) increased slightly from revised October levels, on a daily average basis. Consumption of nickel to make corrosion-resistant, less stress-resistant nickel-base alloys (such as INCONEL 600 and Nickel 200) increased by 2% from revised October levels, on a daily average basis. Sales to plating

companies averaged 28.2 t/d, about 10% less than October sales of 31.5 t/d.

On November 30, U.S. consumer stocks of cathode, pellets, briquets, and powders totaled 1,220 metric tons (t), down 16% from both the 1,450 t (revised) for October 31 and the 1,450 t reported for December 31, 2004. Stocks in London Metal Exchange (LME) warehouses totaled 23,964 t on November 30, 30% greater than 18,420 t on October 31.

The United States imported 122,000 t of primary nickel in the first 10 months of 2005, 9% greater than 112,000 t for the corresponding period in 2004. Trade data for November will appear in a subsequent report.

Some of the percentages reported in the first paragraph are based on data concealed to avoid revealing individual company proprietary data.

TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE¹

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total	Total year to date
2004:					
November	4,650	504	37	5,190	60,400
December	4,570	482	36	5,090	65,500
January-December	58,400	6,600	461	65,500	XX
2005:					
January	5,270	589	40	5,900	5,900
February	5,150	534	38	5,720	11,600
March	5,160	533	38	5,730	17,400
April	5,540	500	45	6,090	23,400
May	5,210	551	36	5,790	29,200
June	5,630	561	39	6,230	35,500
July	4,960	547	35	5,540	41,000
August	5,310	594	30	5,930	46,900
September	5,370	525	29	5,920	52,800
October	5,410 ^r	605	32 ^r	6,040 ^r	58,900
November:					
Steel:					
Stainless and heat resisting	411	208	W	619	19,600
Alloy (excludes stainless)	244	--	--	244	2,780
Superalloys	1,310	--	W	1,310	12,900
Copper-nickel alloys	W	--	--	W	W
Electric, magnetic, and expansion alloys	13	--	--	13	145
Other nickel & nickel alloys	W	--	W	W	W
Cast iron	W	--	--	W	W
Electroplating (sales to platers)	846	--	--	846	9,580
Chemical and chemical uses	W	--	--	W	W
Other uses	1,630	--	29	1,660	18,600
Total reported	4,450 ²	208	29	4,690	63,600
Total all companies (calc) ³	XX	XX	XX	8,810	120,000
2005: January-November	57,400	5,740	393	63,600	XX
2004: January-November	53,800	6,120	424	60,400	XX

¹Revised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category. XX Not applicable. -- Zero.

²Data are rounded to no more than three significant digits; may not add to totals shown.

³Of consumption, 4,170 metric tons were consumed as cathodes and pellets, the remainder as briquets and powder.

³Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (53.17%) to apparent primary consumption for 2003.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS,
BY FORM AND USE^{1,2}

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total
2004:				
November	1,360	170	59 ^r	1,590 ^r
December	1,450	147	45 ^r	1,640 ^r
2005:				
January	1,540	192	52 ^r	1,790 ^r
February	1,610	226	70 ^r	1,900 ^r
March	1,960	221	45 ^r	2,230 ^r
April	1,650	183	50 ^r	1,890 ^r
May	1,760	198	55 ^r	2,010 ^r
June	1,590	215	38 ^r	1,850 ^r
July	1,440	217	48 ^r	1,710 ^r
August	1,530	215	46 ^r	1,790 ^r
September	1,460	161	53 ^r	1,680 ^r
October ^f	1,450	160	47	1,660
November:				
Steel (stainless, heat resisting and alloy)	336	73	(3)	409
Nonferrous alloys ⁴	866	W	(3)	866
Foundry (cast irons)	(3)	W	--	(3)
Chemical (catalysts, ceramics, plating salt, etc.) and unspecified uses	18	W	29	47
Total	1,220	73	29	1,320

^rRevised. W Withheld to avoid disclosing company proprietary data. -- Zero

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks held by companies that consume nickel in more than one end use category are credited to the major category. Stocks are subject to revisions owing to inventory adjustments.

³Included in the "Chemical and unspecified uses" category.

⁴Includes superalloys, nickel-copper and copper-nickel alloys, permanent magnet alloys, and other nickel alloys.

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE¹

(Metric tons, nickel content)

Period	Consumption			Stocks		
	Ferrous scrap ²	Nonferrous scrap ³	Total scrap	Ferrous scrap ²	Nonferrous scrap ³	Total scrap
2004:						
November	5,950	740	6,690	3,550	63	3,620
December	6,430	585	7,010	3,320	65	3,390
January-November	68,700	8,740	88,200	XX	XX	XX
January-December	75,100	9,330	84,400	XX	XX	XX
2005:						
January	5,720	648	6,370	2,330	72	2,400
February	4,680	736	5,420	2,440	82	2,530
March	4,510	799	5,310	2,490	96	2,590
April	4,930	762	5,700	2,510	95	2,610
May	3,790	776	4,560	2,620	93	2,710
June	4,520	698	5,220	2,810	115	2,930
July	4,120	658	4,780	2,740	102	2,840
August	4,360	748	5,110	2,630	113	2,740
September	4,490	709	5,200	2,800	99	2,900
October	5,000	638	5,640	3,010	110	3,120
November	5,520	611	6,130	2,630	98	2,730
January-November	51,600	7,780	59,400	XX	XX	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

³Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of origin	Cathodes pellets, and briquets	Powder and flakes	Ferro-nickel	Metal-lurgical-grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date ⁴	Wrought nickel
2004:										
October	11,100	976	1,280	210	535	780	321	15,300	128,000	43
November	9,140	659	1,240	240	602	696	378	13,000	141,000	33
December	9,380	814	1,730	170	403	1,340	295	14,100	155,000	46
January-December	107,000	9,220	13,900	1,210	7,850	11,000	4,440	155,000	XX	796
2005:										
January	9,040	756	1,940	114	585	780	279	13,500	13,500	40
February	10,200	596	2,040	122	524	853	360	14,700	28,200	95
March	7,600	1,010	1,950	488	629	750	334	12,800	40,900	81
April	11,100	813	1,820	325	515	1,070	316	16,000	56,900	65
May	9,140	866	1,260	257	595	831	407	13,400	70,300	75
June	9,010	335	2,470	--	583	776	308	13,500	83,800	119
July	9,050	543	1,700	--	633	624	177	12,700	96,500	89
August	10,500	772	1,370	--	447	402	295	13,800	110,000	116
September	9,410	500	1,890	--	645	443	294	13,200	123,000	94
October:										
Australia	1,310	20	--	--	8	--	--	1,330	10,400	--
Brazil	268	--	--	--	--	--	--	268	1,090	--
Canada	4,670	404	--	13	346	317	(5)	5,750	55,400	(5)
Colombia	--	--	245	--	--	--	--	245	3,240	--
Dominican Republic	--	--	301	--	--	21	--	322	12,400	--
Finland	315	271	--	--	--	--	103	689	3,460	--
France	103	--	--	--	104	--	2	209	1,910	11
Germany	--	1	--	--	23	--	41	65	786	29
Japan	--	1	--	--	5	5	30	41	494	2
Mexico	--	--	--	--	26	105	2	133	2,190	--
New Caledonia	--	--	--	--	--	--	--	--	1,300	--
Norway	1,420	--	--	--	--	--	--	1,420	16,400	--
Russia	160	--	182	--	10	--	--	352	18,300	--
South Africa	--	60	--	--	--	--	--	60	610	--
Sweden	--	--	--	--	--	--	--	--	15	--
United Kingdom	2	29	--	4	131	2	4	172	2,290	4
Venezuela	--	--	--	--	7	5	--	12	250	--
Zimbabwe	93	--	--	--	--	--	--	93	1,360	--
Other	79 ⁶	8	--	--	59	50	104	306	3,040	17
Total	8,410	794	728	17	719	505	286	11,500	135,000	63
2005: January-October	93,400	6,980	17,200	1,320	5,880	7,030	3,060	135,000	XX	836
2004: January-October	88,500	7,750	11,000	798	6,850	8,950	3,770	128,000	XX	717

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴May include revisions for prior months.

⁵Less than ½ unit.

⁶All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY¹

(Metric tons, nickel content)²

Period and country of destination	Cathodes pellets, and briquets	Powder and flakes	Ferro- nickel	Metal- lurgical- grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total ³	Total year to date	Wrought nickel
2004:										
October	60	257	1	2	1,110	3,620	197	5,240	47,600	44
November	77	257	1	45	890	2,530	285	4,080	51,700	42
December	27	196	23	98	1,030	2,980	227	4,580	56,300	95
January-December	972	2,130	68	201	12,400	35,900	4,630	56,300	XX	1,110
2005:										
January	37	211	1	161	1,230	2,400	228	4,270	4,270	63
February	31	165	3	3	877	3,960	316	5,360	9,620	57
March	91	160	12	7	1,070	3,990	289	5,630	15,200	131
April	82	190	6	4	902	5,710	344	7,230	22,500	104
May	84	373	11	2	777	3,230	452	4,930	27,400	129
June	168	176	9	2	523	2,950	460	4,280	31,700	214
July	173	113	4	3	814	3,020	335	4,460	36,200	105
August	91	84	--	1	1,270	3,350	506	5,300	41,500	156
September	147	85	4	5	1,150	3,950	315	5,650	47,100	105
October:										
Australia	--	2	--	--	30	--	--	32	473	3
Belgium	--	2	--	--	--	2	(4)	4	220	--
Canada	27	8	--	--	794	106	99	1,030	10,500	16
China	--	5	--	--	19	1,850	17	1,890	15,100	13
Finland	--	--	--	--	25	457	--	482	5,206	--
Germany	--	13	1	--	25	4	1	44	715	1
India	--	1	--	--	--	204	11	216	2,440	1
Italy	--	14	--	--	--	--	--	14	65	1
Japan	--	8	--	--	33	16	32	89	1,000	13
Korea, Republic of	--	1	--	--	--	192	16	209	3,510	9
Mexico	107	1	--	--	1	1	4	114	3,420	6
Netherlands	--	14	--	--	--	51	18	83	541	(4)
South Africa	--	--	--	--	--	--	--	--	90	--
Spain	--	--	--	--	--	(4)	--	(4)	365	--
Sweden	--	--	--	--	32	(4)	--	32	345	(4)
Taiwan	--	7	--	--	9	453	8	477	4,610	(4)
United Kingdom	--	20	(4)	8	25	4	13	70	986	3
Other	--	52	--	(4)	50	114	62	278	2,630	28
Total	134	148	1	8	1,040	3,450	281	5,060	52,200	94
2005: January-October	1,040	1,710	50	195	9,660	36,000	3,530	52,200	XX	1,160
2004: January-October	869	1,680	44	58	10,500	30,400	4,110	47,600	XX	976

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemicals category includes chlorides (25%); sulfates (22%); other salts (22%); supported catalysts (22%); and oxide, sesquioxide, and hydroxide (65%).

³Excludes wrought nickel.

⁴Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
October	295	285	477	215	7	148	206	1,630	16,300
November	245	247	624	280	41	246	233	1,920	18,200
December	269	300	588	226	43	106	145	1,680	19,900
January-December	3,000	3,120	5,740	2,590	322	3,060	2,080	19,900	XX
2005:									
January	273	220	600	234	35	67	304	1,730	1,730
February	329	255	422	257	49	175	202	1,690	3,420
March	361	294	629	316	16	103	173	1,890	5,320
April	241	338	486	274	33	143	176	1,690	7,010
May	310	355	662	324	43	148	152	1,990	9,000
June	437	422	558	260	20	159	237	2,090	11,100
July	325	342	603	275	29	64	194	1,830	12,900
August	447	360	462	242	20	171	293	2,000	14,900
September	644	314	500	241	34	176	156	2,070	17,000
October:									
Australia	177	--	--	--	--	--	(2)	177	1,310
Belgium	9	--	(2)	2	--	--	(2)	11	92
Canada	1	(2)	3	24	--	15	28	71	463
China	(2)	3	(2)	1	--	--	128	132	817
France	--	27	131	5	--	35	1	199	1,770
Germany	91	148	172	200	20	79	85	795	8,280
Italy	--	57	7	--	--	(2)	12	76	1,250
Japan	--	--	1	1	--	1	(2)	3	188
Mexico	--	--	(2)	--	--	--	5	5	137
Netherlands	--	(2)	--	--	--	--	10	10	169
South Africa	39	--	--	--	--	--	--	39	394
Sweden	--	--	154	4	--	35	--	193	1,920
United Kingdom	116	70	2	--	--	5	7	200	1,180
Other	58	28	10	4	(2)	(2)	190	290	1,220
Total	491	333	480	241	20	170	466	2,200	19,200
2005: January-October	3,860	3,230	5,400	2,660	299	1,380	2,350	19,200	XX
2004: January-October	2,480	2,580	4,530	2,090	238	2,700	1,700	16,300	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY¹

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date
2004:									
October	517	776	190	390	26	178	236	2,310	24,200 ^r
November	613	1,110	183	327	21	148	256	2,660	26,900
December	823	1,100	157	350	5	150	244	2,830	29,700
January-December	7,510	10,400	1,850	4,470	244	1,800	3,440	29,700	XX
2005:									
January	994	1,180	84	312	11	226	186	2,990	2,990
February	910	1,050	104	392	10	163	278	2,910	5,900
March	1,200	1,350	178	388	7	200	404	3,730	9,630
April	499	1,350	135	340	8	190	281	2,800	12,400
May	1,200	1,170	158	378	3	191	268	3,370	15,800
June	726	1,220	108	275	5	216	272	2,820	18,600
July	1,130	1,060	170	409	5	211	293	3,280	21,900
August	1,010	1,310	114	301	9	285	360	3,390	25,300
September	565	1,250	92	398	26	237	286	2,850	28,100
October:									
Australia	--	(2)	1	--	--	1	1	3	59
Belgium	63	251	23	28	--	(2)	(2)	365	3,490
Canada	6	61	14	30	10	44	30	195	1,860
China	22	61	1	51	--	105	40	280	2,000
France	160	210	1	9	(2)	2	2	384	4,120
Germany	26	88	10	102	(2)	10	1	237	1,300
India	--	2	1	2	--	(2)	(2)	5	360
Ireland	(2)	--	(2)	2	--	--	(2)	2	60
Israel	1	61	(2)	2	--	--	(2)	64	941
Italy	60	17	1	5	(2)	(2)	1	84	968
Japan	298	97	(2)	12	(2)	20	1	428	5,810
Korea, Republic of	1	13	7	45	8	4	1	79	695
Mexico	(2)	26	18	27	8	99	281	459	3,180
Netherlands	(2)	4	(2)	1	--	1	1	7	189
Singapore	1	3	(2)	1	--	1	(2)	6	236
Spain	1	--	--	(2)	--	1	(2)	2	113
Sweden	--	1	(2)	7	--	(2)	3	11	217
Switzerland	45	2	--	1	(2)	(2)	1	49	237
Taiwan	10	1	(2)	4	--	5	2	22	333
United Kingdom	(2)	183	13	15	(2)	5	6	222	2,790
Other	37	19	35	49	1	119	30	290	2,380
Total	731	1,100	125	393	27	417	401	3,190	31,300
2005: January-October	8,970	12,000	1,270	3,590	113	2,340	3,030	31,300	XX
2004: January-October	6,070	8,210	1,510	3,800	216	1,500	2,940	24,200	XX

^rRevised. XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
November 2005:		
Stainless and heat resisting steels	99	1
Alloy steels	97	3
Superalloys	88	12
Copper-nickel alloys	96	4
Other nickel-base alloys	100	(1)

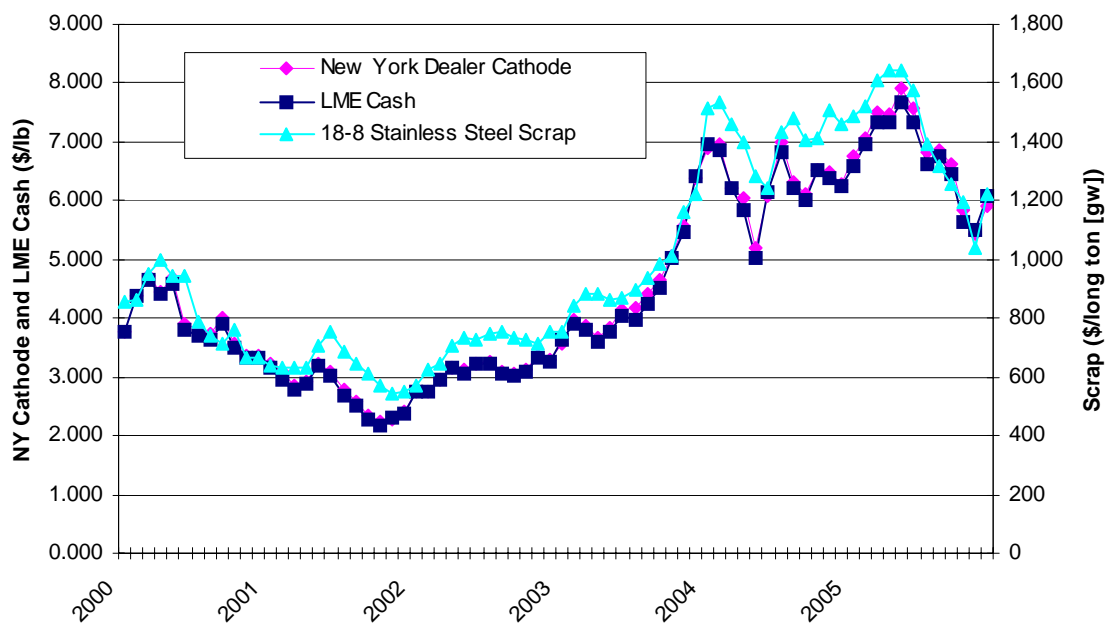
¹Less than ½ unit.

TABLE 9
NICKEL PRICES

Date	Platts Metals Week				American Metal Market
	Cathode NY Dealer \$/lb.	LME Cash mean ¹ \$/t	LME Cash mean ¹ \$/lb.	18/8 Stainless steel scrap Free market \$/long ton (gw)	18/8 Stainless steel scrap Pittsburgh \$/long ton (gw)
2004:					
Average for month of:					
November	6.488	14,045.455	6.371	1,506	1,562
December	6.286	13,768.810	6.245	1,457	1,523
Yearly average	6.341	13,823.241	6.270	1,427	1,473
2005:					
Average for week ending:					
November 4	5.47-5.68	11,616.500	5.269	1,000-1,050	1,325-1,350
November 11	5.54-5.77	11,877.500	5.388	1,000-1,075	1,200-1,225
November 18	5.26-5.44	11,845.500	5.373	950-1,075	1,200-1,225
November 25	5.44-5.60	12,635.500	5.731	1,050-1,100	1,200-1,225
December 2	5.72-5.89	12,766.000	5.791	1,075-1,175	1,200-1,225
December 9	5.74-6.18	13,517.500	6.131	1,175-1,225	1,175-1,200
December 16	6.10-6.40	13,790.500	6.255	1,250-1,300	1,175-1,200
December 23	6.12-6.26	13,308.500	6.037	1,225-1,300	1,175-1,200
December 30	5.92-6.12	13,367.500	6.063	1,225-1,300	1,175-1,200
Average for month of:					
January	6.748	14,501.250	6.578	1,487	1,513
February	7.065	15,344.625	6.960	1,520	1,513
March	7.510	16,184.524	7.341	1,609	1,563
April	7.480	16,136.429	7.319	1,647	1,685
May	7.920	16,919.750	7.675	1,645	1,629
June	7.564	16,154.432	7.328	1,578	1,610
July	6.820	14,570.833	6.609	1,390	1,538
August	6.863	14,886.932	6.753	1,315	1,388
September	6.610	14,223.088	6.451	1,260	1,388
October	5.840	12,396.548	5.623	1,194	1,350
November	5.429	12,111.477	5.494	1,038	1,244
December	5.923	13,425.625	6.090	1,225	1,193
Yearly average	6.814	14,737.960	6.685	1,409	1,468
2006:					
Average for week ending:					
January 6	6.001-6.371	13,903.125	6.306	1,300-1,355	1,175-1,200

¹Mean of the cash buyer price and the cash seller and settlement price.

2000-2005 AVERAGE MONTHLY PRICES
 (Derived from Metals Week and American Metal Market quotations)



2000-2005 STOCKS

